



IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

PATENT APPLICATION

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Case: **4-4-4-18**

Serial No.: **09/728043**

Group Art Unit:

2686

Filing Date: **December 1, 2000**

Examiner: **N. Ly**

Title: **Supplemental Channel Sharing Algorithm**

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

Enclosed in triplicate is an Appeal Brief in the above-identified patent application.

Please charge the amount of \$500 covering payment of the fee for the Appeal Brief,
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Respectfully,

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Date: 20 September 2005

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Margaret Cardoso



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Dan Anthony Balogh et al.

Serial No.: 09/728,043

Filed: December 01, 2000

For: Supplemental Channel Sharing Algorithm

Examiner: Nghi H Ly

Group Art Unit: 2686

Attorney Docket: 4-4-18

APPEAL BRIEF

Commissioner of Patents
Arlington, VA

Sir:

Applicant hereby submits an original

and two copies of this Appeal Brief to the

Board of Patent Appeals and Interferences in

response to the Final Office Action dated April 20, 2005. A Notice of Appeal was file on July 20, 2005,
so this Appeal Brief is believed to be timely filed.

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I. REAL PARTY IN INTEREST

The present application is owned by Lucent Technologies, Inc. The assignment of the present application to Lucent Technologies, Inc., is recorded at Reel 011336, Frame 0093.

II. RELATED APPEALS AND INTERFERENCES

Applicant is not aware of any related appeals and/or interferences that might affect the outcome of this proceeding.

III. STATUS OF THE CLAIMS

Claims 1-10 are pending in the application. The claims as currently pending are attached as Appendix A. Claims 1-9 were rejected under 35 U.S.C. §102(e) as being unpatentable over Sonetaka (US 6,591,107). Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Sonetaka in view of Vanderspool, II et al (US 5,261,118).

IV. STATUS OF AMENDMENTS

There were no amendments after the final rejections.

V. SUMMARY OF THE INVENTION

The present invention is a method for utilizing SCH resources more efficiently for supplemental channels (SCH) by minimizing gaps between data bursts due to overhead delays. Such gaps are minimized using a supplemental channel sharing algorithm to prospectively assign SCH resources supporting existing SCHs and to schedule future issuance of data notified requests (DNR) such that currently unavailable SCH resources may be prospectively assigned based on states of the SCH resources, wherein an existing SCH is a SCH over which a data burst is currently being transmitted and a DNR is a request for SCH resources. That is, the present invention allows resources which are not currently

available, e.g., resources currently being used to support a supplemental channel for another user, to now be scheduled to support some supplemental channel in the future for a different or same user.

In one embodiment, the present invention is a method of sharing supplemental channel resources comprising the steps of receiving a data notify request, and prospectively assigning currently unavailable supplemental channel resources to support a future supplemental channel for a user associated with the received data notify request if the data notified request was received during an open assignment state, wherein a future SCH is a SCH supported by SCH resources which are either currently unavailable or has been prospectively assigned.

By allowing resources to be scheduled to support some future channel while such resources are currently unavailable, gaps between data bursts associated with overhead delays are minimized resulting in a more efficient use of the resources.

VI. ISSUES ON APPEAL

Appellant respectfully requests that the Board review and overturn the five rejections present in this case. The following issues are presented on appeal in this case:

- (A) Whether claims 1-9 are anticipated by Sonetaka; and
- (B) Whether claim 10 is rendered obvious by Sonetaka in view of Vanderspool, II et al.

VIII. ARGUMENT

A. Legal Standards

As the Examiner well knows, an anticipating reference by definition must disclose every limitation of the rejected claim in the same relationship to one another as set forth in the claim. *In re Bond*, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, the prior art reference (or references when combined) must teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). Second, there must be some suggestion or motivation,

either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. That is, there must be something in the prior art as a whole to suggest the desirability, and thus the obviousness, of making the combination. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1986). In fact, the absence of a suggestion to combine is dispositive in an obviousness determination. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573 (Fed. Cir. 1997). The mere fact that the prior art can be combined or modified does not make the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990); M.P.E.P. § 2143.01. Third, there must be a reasonable expectation of success.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991); M.P.E.P. § 2142. A recent Federal Circuit case emphasizes that, in an obviousness situation, the prior art must disclose each and every element of the claimed invention, and that any motivation to combine or modify the prior art must be based upon a suggestion in the prior art. *In re Lee*, 61 U.S.P.Q.2d 143 (Fed. Cir. 2002). Conclusory statements regarding common knowledge and common sense are insufficient to support a finding of obviousness. *Id.* at 1434-35. Moreover, it is the claimed invention, as a whole, that must be considered for purposes of determining obviousness. A mere selection of various bits and pieces of the claimed invention from various sources of prior art does not render a claimed invention obvious, unless there is a suggestion or motivation in the prior art for the claimed invention, when considered as a whole.

It is by now well established that teaching away by the prior art constitutes *prima facie* evidence that the claimed invention is not obvious. *See, inter alia, In re Fine*, 5 U.S.P.Q.2d (BNA) 1596, 1599 (Fed. Cir. 1988); *In re Nielson*, 2 U.S.P.Q.2d (BNA) 1525, 1528 (Fed. Cir. 1987); *In re Hedges*, 228 U.S.P.Q. (BNA) 685, 687 (Fed. Cir. 1986).

B. Claims 1-9 are not anticipated by Sonetaka.

Claim 1-9 were rejected under 35 U.S.C. §102(e) as being unpatentable over Sonetaka. Applicants respectfully traverse for the following reasons. First, the office action alleges that Sonetaka teaches “a method of sharing supplemental channel resources” (underline added). The office action cites the Abstract and col. 1 of Sonetaka in support thereof. Applicants respectfully disagree. The Abstract and column 1 teach service channels, not supplemental channels. A service channel, as taught in Sonetaka, appears to be a channel with dedicated resources. The resources supporting the service channel are not concurrently supporting other service channels. The resources cannot be used to support another service channel until the current service channel (for which it supports) no longer exist (or until it is release). Such a channel is also known in the art to be a fundamental channel. By contrast, the present invention (and claim 1) involves supplemental channels. A supplemental channel is defined in the patent application at page 1, lines 19-21 as a channel supported by resources which may also be concurrently supporting other supplemental channels. As stated by the Federal Circuit in Hormone Research Found. v. Genentech, Inc., 904 F.2d 1558 (1990), “[i]t is a well-established axiom in patent law that a patentee is free to be his or her own lexicographer,..., and thus may use terms in a manner contrary to or inconsistent with one or more of their ordinary meanings.” For this reason, an analysis of the specification and prosecution history is important to proper claim construction. *Infra*. The term “supplemental channel resources” has clearly been defined in the specification and need not be clearly articulated in the claims, as suggested by the Examiner during the Examiner’s interview of July 19, 2005. Sonetaka does not teach any resources, much less supplemental channel resources, which can support multiple existing supplemental channels.

Second, the office action alleges that Sonetaka teaches open assignment and open waiting states. In particular, the office action alleges that “[o]n receipt of the request for assigning radio-signal channel to the subscriber station the moment before the request is received” (Sonetaka at col. 4, lines 44-45) reads on Applicants’ open assignment state. The office action further alleges that “transmits free radio signal channel, or...one of free channels in advance reserved the moment the free channel is available” (Sonetaka at col. 4, lines 47-51 and col. 5, lines 16-17) reads on Applicants’ open waiting states. Applicants respectfully disagree. With respect to open assignment state, Sonetaka discloses at col. 4, lines 44-51 that a free radio signal channel is assigned upon receipt of a request. In other words, the radio signal channel is already free when the request is received. By contrast, Applicants’ open assignment state is defined in the patent application as corresponding to a state during which supplemental channel resources are not currently free (i.e., currently supporting a supplemental channel) but can be prospectively assigned. See patent application at page 11, lines 18-20. Additionally, as recited in claim 1, the

term open assignment state is clearly articulated as a "...state during which the currently unavailable supplemental channel resources are available for prospective assignment." During the Examiner's Interview of July 19, 2005, Examiner cites col. 1, lines 52-53 for the proposition that Sonetaka discloses assigning occupied radio-signal channels which can then be inferred to allegedly teach open assignment states. However, applicants believe Examiner is mischaracterizing what is disclosed by Sonetaka. It is applicants' interpretation that Sonetaka teaches a method of assigning a radio signal channel to traffic having a high service rank even if radio signal channels are all occupied by traffics each having a low service rank. Sonetaka accomplishes this by reserving radio signal channels for use only by traffic having a high service rank. These radio signal channels are reserved in advance but are not assigned until all the other radio signal channels are occupied. When all the other radio signal channels are occupied, then can these reserved radio signal channels be assigned assuming that they are still free. This is essentially the invention of Sonetaka and is describe throughout Sonetaka. See, for example, col. 4, line 37 to col. 5, line 38, and Figs. 4-6. To characterize col. 1, lines 52-53 of Sonetaka otherwise would be improper. Thus, since no occupied radio signal is being prospectively assigned, there can be no teaching by Sonetaka of claim 1's open assignment state.

With respect to open waiting states, Sonetaka discloses at col. 4, lines 47-51 assigning a free radio signal channel, and at col. 5, lines 16-17 reserving free channels in advance for Service A. By contrast, Applicants' open waiting state corresponds to a state in which waiting user data notify requests (DNRs) may be scheduled to be issued for supplemental channel resources not currently free nor available for prospective assignment. See patent application at page 12, lines 19-22. Applicants fail to see how assigning a free radio signal channel or reserving free channels in advance for Service A, as disclosed in Sonetaka, can be interpreted to be scheduling DNRs associated with waiting users to be issued.

Third, the office action alleges that Sonetaka teaches "receiving a data notify request indicating a request for supplemental channel resources: citing col. 4, lines 43-51 in support thereof. Applicants respectfully disagree. Sonetaka does not teach a data notify request for supplemental channel resources. Sonetaka teaches a request for a service channel. As mentioned earlier, a service channel is not a supplement channel. Thus, a request for a service channel is not a request for supplemental channel resources.

Fourth, the office action alleges that Soentaka teaches "prospectively assigning currently unavailable supplemental channel resources...if the data notify request was received during an open assignment state during which the currently unavailable supplemental channel resources are available for prospective assignment." Col. 4, lines 62-65 and col. 7, line 65 to col. 8, line 2 were

cited in support thereof. Applicants respectfully disagree. Sonetaka does not teach assigning currently unavailable supplemental channel resources. Sonetaka teaches a system in which channels are reserved for Service A subscribers. The reserved channels are currently free channels. Neither the reserved channels nor any other channels are being prospectively assigned when they are not currently free. Sonetaka teaches that the reserved channels are currently free channels which are reserved in advance for Service A subscribers. The reserved channels are not assigned to a particular Service A subscriber in advance. The reserved channels can be assigned to Service A subscribers only when the reserved channels are currently free and when there are no non-reserved channels free. See col. 4, line 37 to col. 5, line 38, and Figs. 4-6. When the reserved channels are not free, they cannot be assigned to any subscriber (Service A nor B subscribers). That is, non-free reserved channels cannot be prospectively assigned. By contrast, claim 1 involves “prospectively assigning currently unavailable supplemental channel resources.” That is, the resources are not currently free but may nevertheless be assigned to support some future channel. Furthermore, Sonetaka does not disclose assigning resources if a data notify request was received during an open assignment state since, as mentioned earlier, Sonetaka does not teach open assignment states.

For at least the aforementioned reasons, appellants respectfully submit that claims 1-9 are not anticipated by Sonetaka and request that the Examiner’s rejections of claims 1-9 be REVERSED.

(C) Claim 10 is not rendered obvious by Sonetaka in view of Vanderspool, II et al.

Claim 10 was rejected under 35 U.S.C. §103(a) as being unpatentable over Sonetaka in view of Vanderspool, II et al. Applicant respectfully traverses for the reasons discussed above. In particular, Sonetaka nor Vanderspool, alone or in combination, teach all the limitations of claim 10 which depends upon and includes all the limitations of claim 1. Accordingly, it is felt that claim 10 is patentable under 35 U.S.C. §103(a) over Sonetaka in view of Vanderspool, II et al.

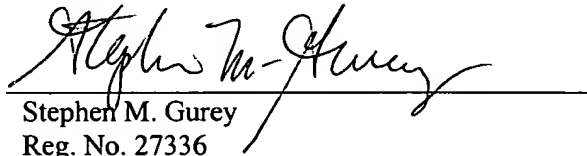
For at least the aforementioned reasons, Appellant respectfully submits that the Examiner has failed to make a *prima facie* case that the invention set forth in claim 10 is obvious over Sonetaka in view of Vanderspool II et al. Appellant requests that the Examiner’s rejection of claim 10 be REVERSED.

IX. CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner erred in not allowing all claims pending in the present application, claims 1-10, over the prior art of record. The undersigned may be contacted at (973) 386-6377 with respect to any questions, comments or suggestions relating to this appeal.

Respectfully submitted,

Date: 20 September 2005



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APPENDIX A

1. (previously presented) A method of sharing supplemental channel resources in a system utilizing open assignment and open waiting states for responding to a resource request, the method comprising the steps of:
 - receiving a data notify request indicating a request for supplemental channel resources;
 - and
 - prospectively assigning currently unavailable supplemental channel resources to support a future supplemental channel for a user associated with the received data notify request if the data notify request was received during an open assignment state during which the currently unavailable supplemental channel resources are available for prospective assignment.
2. (previously presented) The method of claim 1 comprising the additional step of:
 - determining whether other supplemental channel resources are available if the data notify request was not received during the open assignment state.
3. (previously presented) The method of claim 2 comprising the additional step of:
 - assigning the other supplemental channel resources to the user if the other supplemental channel resources are available.
4. (previously presented) The method of claim 3, wherein the step of assigning the other supplemental channel resources comprises the step of:
 - scheduling a next data notify request to be issued for the user in a next preferred user assignment window associated with the other supplemental channel resources, the preferred user assignment window corresponding to a time period during which a current user may be scheduled to issue a data notify request.
5. (previously presented) The method of claim 2 comprising the additional step of:
 - determining whether the currently unavailable supplemental channel resources are in an open waiting state during which the currently unavailable supplemental channel resources are not available for prospective assignment.
6. (previously presented) The method of claim 5 comprising the additional step of:
 - scheduling a next data notify request for the user in a next waiting user assignment window associated with the currently unavailable supplemental channel resources if the currently

unavailable supplemental channel resources are in the open waiting state, the waiting user assignment window corresponding to a time period during which a waiting user may be scheduled to issue a data notify request.

7. (previously presented) The method of claim 5 comprising the additional step of:
scheduling a next data notify request for the user to be issued if the currently unavailable supplemental channel resources are not in the open waiting state.
8. (previously presented) The method of claim 1, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the step of:
determining whether the user is a current user of supplemental channel resources.
9. (previously presented) The method of claim 8, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the additional steps of:
reducing a continuation count for the user if the user is a current user; and
scheduling when to issue a next data notify request for the user based on the continuation count.
10. (previously presented) The method of claim 8, wherein the step of prospectively assigning the currently unavailable supplemental channel resources comprises the additional step of:
determining if a first data rate is different from a second data rate, the first data rate being associated with the currently unavailable supplemental channel resources, the second data rate being associated with the future supplemental channel.